

Evaluating Productively with Revoicing

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ABSTRACT

Teachers' language moves play an important role in classroom interactions. How teachers respond to students' ideas can either facilitate or constrain students' contributions. This paper delves into two language moves that are often used by teachers—revoicing and evaluation. Specifically, it examines examples from a culturally and linguistically diverse fourth-grade science class to demonstrate how productive evaluation with revoicing can support students in making sense of scientific topics. By using this strategy, the teacher transforms evaluation from a conversation stopper and denial, into a springboard for belonging and deeper learning. It illustrates how substantive teacher responses can create opportunities for deeper student participation and elaboration of ideas in science classrooms.

Keywords: Classroom interaction, Teachers' language, Evaluation, Revoicing, Student participation

Introduction

Classroom interaction is essential in multicultural and multilingual settings for fostering students' sensemaking in science (Warren et al., 2001). Through dialogue, students build on their cultural and experiential knowledge to articulate their understanding, engage with new concepts, and refine their ideas (Shwartz et al., 2009). Teachers play a pivotal role in shaping these interactions because the talk moves teachers use can either constrain or enable students' engagement with others and their contributions in scientific discourse (Haverly et al., 2020). The challenge for teachers in responding to students' ideas lies in evaluating their responses in ways that affirm their rightful presence (Calabrese Barton & Tan, 2020) by elevating their contributions while guiding them toward more accurate or refined ideas (Waring, 2008). This is particularly challenging for teachers when students' ideas are unexpected or not anticipated (Li et al., 2025). This delicate balance is especially important when students offer partially correct ideas. Simply stating "yes" or "right" might encourage students but often leaves important areas of misunderstanding unaddressed. On the other hand, directly correcting or dismissing an idea can deflate student confidence and deter further contributions. This is a possibility for minoritized students, who may have experienced their ideas being sidelined in the past, and since their bids for recognition as science people have been disrupted, they may be unsure about belonging in the science classroom (Carlone & Johnson, 2007).

How can we evaluate students' ideas while encouraging their curiosity, fostering their confidence, and deepening their understanding? How can we create a classroom environment in which minoritized students feel encouraged to continually contribute to the class's

sensemaking discussions? In this article, we present revoicing as a means to help achieve this balance. Revoicing is a strategy in which teachers restate students' ideas in a manner that acknowledges their contribution while providing targeted evaluation. By restating students' responses, teachers may be able to validate student thinking while introducing new information, asking guiding questions, or offering clarifications (Huang, 2025). This strategy can serve to both reinforce correct understanding and create space for students to reflect, refine, and expand their ideas (Haverly et al., 2020; O'Connor & Michaels, 1996, 2007).

Moving Beyond the I-R-E Sequence

The traditional Initiation-Response-Evaluation (I-R-E) sequence is often characterized as an authoritative structure for classroom interaction (Mehan, 1979; Mortimer & Scott, 2003). In this sequence, teachers maintain exclusive control over the initiation and evaluation phases, limiting knowledge flow to a one-way dynamic (O'Connor & Michaels, 1996, 2007). Although effective for assessing correctness, this structure frequently hinders deeper exploration. This is because even explicitly positive evaluations, such as "good," "excellent," and "perfect," often terminate the interaction. Positive evaluations imply that students' correct responses are conclusive and beyond challenge, thereby suppressing students' opportunities for elaboration, justification, or exploring alternative correct answers (Waring, 2008). Likewise, when the evaluation is negative, the I-R-E sequence can have a stifling impact on student participation as it highlights the power imbalance between teacher and student: the teacher is positioned as the knowledge authority, while the student is framed as a novice (O'Connor & Michaels, 2007). As a result, the teacher's evaluation moves within the I-R-E sequence often brings an end to students' line of thinking, limiting opportunities for deeper engagement (Colley & Windschitl, 2016).

However, the evaluation phase of an I-R-E interaction does not necessarily suppress students' ideas. As noted by Mortimer and Scott (2003), when used thoughtfully as "feedback" in the third phase of the I-R-E (or I-R-F) sequence, evaluation can invite further contributions. For example, combining a positive evaluation with a follow-up question can sustain and deepen the conversation (Huang, 2025): Instead of stopping with "great point," after a student made a comment about fossils on mountaintops, a teacher might say, "Great point! How do the fossils on the top of the mountain relate to what we've been saying about continents moving?" This shift highlights that it is not the act of evaluation itself that limits students' thinking, but rather only evaluation that fails to respond substantively to their ideas. As shown in this example, when the teacher evaluated and then asked a follow-up question, they mined the student's idea to evaluate and elicit deeper reasoning.

Revoicing

Revoicing—a language strategy in which teachers restate or rephrase students' ideas—can be a powerful tool for fostering meaningful classroom dialogue (O'Connor & Michaels, 1996, 2007). Common examples include phrases like, "So I hear you saying...", "So you think..." or "So Allen predicts that...". Typically, this is expressed through indirect speech (e.g., "So she thinks that..."), attributing the idea back to the student while also incorporating the teacher's

interpretation (O'Connor & Michaels, 1996). Using indirect speech also alters the one-way knowledge transmission pattern in the I-R-E sequence, lending (or appearing to lend) power and authority to students' voices within the discussion (O'Connor & Michaels, 1993, 1996).

When combined with evaluation and feedback, revoicing can both validate students' contributions and create opportunities to deepen student understanding (Huang, 2025). By rephrasing students' ideas with evaluative acknowledgment and then extending the discussion through customized feedback, a follow-up question, or both, teachers take up student ideas and create opportunities for students to clarify, refine, and expand their thinking (Huang, 2025). Students' ideas, and thus their presence, are legitimized regardless of whether the idea is correct or whether the teacher expects to hear it (Calabrese Barton & Tan, 2020).

In the following sections, we share specific examples of productive evaluation from a culturally and linguistically diverse fourth-grade science class in an urban school district in the Midwestern USA, Great Lakes region. The examples demonstrate how productive evaluation, in which there is implicit or explicit evaluation combined with revoicing, can support students in making sense of scientific ideas. By using this strategy, teachers transform evaluation from a conversation-stopper and denial into a springboard for deeper learning and belonging.

Example 1—Revoicing with Positive Evaluation

In this episode, the teacher utilized analogy pictures to deepen students' understanding of water-land interactions. Students were asked to match one picture from a set of analogies with another depicting real-world interactions and to explain their reasoning. A student, TK, chose an analogy of a girl on a slide to connect with water's impact on land (e.g., erosion), as observed in a video from the previous day.

- 1 Teacher: TK, go ahead.
- 2 TK: Um, I said one was the girl lying on the slide. It kind of looks like the one when they poured the water on the sand, and it broke into 'on land' pieces. And the pictures.
- 3 Teacher: Yeah. So you're making a connection between the girl going down the slide to our stream table that we looked at in the video yesterday. Nice job connecting what we're seeing and learning about today with what we already know. I think that maybe what I hear you saying is, the water chose the path that already had the edges formed on it. So the land at first was holding the water in there. But then after that, the water's energy caused the sand to fall down from erosion and to move into different spots, and then the stream table water took a different path.
- 4 TK: Yeah. Then also on the broom sweeping the toys. It's kind of like the rocks and the water moving.
- 5 Teacher: Yeah, that's true that brooms sweeping the toys is like how the water has the energy to move the rocks along from what we have seen as well. Thanks for sharing.

In this episode, TK began by suggesting that the picture of a girl on a slide resembled how water broke land into pieces, as observed in a stream table experiment in the video (Line 2). The teacher immediately affirmed TK's connection, praising her for linking new ideas to prior knowledge. This positive evaluation validated TK's initial reasoning. Additionally, the teacher revoiced and expanded TK's idea by incorporating scientific details, emphasizing how water follows pre-formed paths before reshaping the land through erosion (Line 3).

TK then contributed another idea, drawing a connection between brooms sweeping toys and water moving rocks (Line 4). The teacher once again revoiced and confirmed TK's new contribution with further positive reinforcement (Line 5). This example highlights how evaluation, paired with revoicing, seemed to make space for further student contributions even when the original idea was accurate. By affirming and elaborating on student ideas, the teacher not only validated TK's thinking, but also encouraged deeper engagement and a richer exchange of ideas.

Example 2—Revoicing with a Partial Correction

This example illustrates how a teacher evaluated a student's idea and provided constructive feedback while partially disagreeing with it. The interaction took place during a lesson in which the teacher and students were co-constructing a model to show the interaction among water, roots, and soil. When a student, LL, voluntarily shared an idea about why water could wash away sand, the teacher used evaluation with revoicing to clarify and build on the idea about how water's energy affects soil and sand movement.

- 1 LL: Wait, Miss H. I also have another thing to go with the teacher's thing.
- 2 Teacher: OK, go ahead.
- 3 LL: The reason, also, why the sand washed away with the water is because, you know, last time how we learned about, like, the first one we learned that water's energy and that some of the water could suck up sand or something.
- 4 Teacher: I think that I agree with you about 99% of that. I think I'm going to add an important part here. It rains so much that, right here, the energy from the water was washing away or moving the soil. (Adding "the energy from" in the sentence of "It rains so much that..."). Do you know what? There's an important word in that sentence that proves that there was energy. Right here, moving. (Used the yellow line to highlight "moving") ... Since the water was moving the soil, that proves that the water had energy. So you're exactly right. It wasn't exactly sucking up the sand like a vacuum, and then all the sand was gone. But it was using that energy from the water to move the soil to a different place. So that's a good question too. This soil that used to be here, that clearly is just whoosh washed away. Did it disappear like a magic wand, or where did that soil go?
- 5 LL: I think it went to the bottom. Or somewhere else.

In this episode, the teacher evaluated LL's idea, offering direct feedback without dismissing it. She began by acknowledging and validating the idea, explicitly evaluating LL's idea by expressing agreement with 99% of it. This opening may have affirmed the student's thinking and helped build confidence. The teacher then extended the evaluation by revoicing LL's idea while identifying pieces that needed adjustment and clarifying the part about water "sucking up" sand. These additions provided an explanation that refined LL's understanding and feel like a fairly typical evaluation in the I-R-E sequence.

Then, instead of letting the discussion end with that extended evaluation, the teacher posed an open-ended question: "Did it disappear like a magic wand or where did that soil go?" This question encouraged LL to think about the relationships between the soil and roots, leading to her response that the soil likely "went to the bottom or somewhere else." By combining evaluation, clarifying revoicing, and follow-up questioning, the teacher supported further participation and reasoning.

This example highlights how evaluation, when paired with revoicing, can advance students' sensemaking in science. The teacher's approach ensured that LL's idea was valued, even though it contained errors, and the discussion encouraged further exploration of the concept. Through this method, the teacher maintained the flow of ideas and supported students in refining and expanding their understanding.

Example 3—Revoicing as a Scaffold

This example highlights how a teacher employed revoicing as an evaluative tool to guide a student's ideas towards scientific thinking during a discussion about how mountain ranges are formed. The teacher presented the scenario of a saltwater fish fossil found on a mountain and asked students to explain what this might indicate about the formation of large landforms. One student, MM, believed that mountains were created by god.

- 1 Teacher: Alrighty. If you don't have comments on that, I'm just going to go ahead and move forward to the next part. So the question is, if the fossil is a saltwater fish, what would that mean about how the land may have changed? Or how might these big landforms, like mountain ranges, have formed? So think about the land, the mountains. How did they get there? How? How were they formed? I'll pause there in case anyone has any thoughts they want to share about it.
- 2 MM: Created by God.
- 3 Teacher: OK. That's definitely the way that the Bible and the Koran tell it: that the mountains and the land were created by God. Do you think scientists would agree with that exactly, or do they have some more ideas of how God might have created this?
- 4 MM: Well, they do know God created everything on this earth.
- 5 Teacher: Yeah, the Bible tells us that God created it just with his words.
- 6 MM: One scientist predicts that the mountains come from the ground.
- 7 Teacher: The mountains come from the ground, did you say?

- 8 MM: Yes, it's a little rock which grows bigger, bigger and bigger every year.
9 Teacher: Alright, so how would a little rock grow bigger? Anyone have any ideas? Do you agree with him? Do you disagree with him? Alright, I'm just writing my slides. Go ahead.

In this episode, the teacher began by posing a question about the implications of finding a saltwater fish fossil on a mountain, prompting students to think about the formation of large landforms. MM initially provided a religious explanation, stating that God created the mountains (Line 2). The teacher revoiced this response by directly acknowledging that the student was connecting to religious teachings, stating, "That's definitely the way that the Bible and the Koran tell it that the mountains and the land were created by God " (Line 3). She then followed up with a question that encouraged MM to consider how scientists might approach the question, implying a negative evaluation by differentiating between religious and scientific explanations.

MM's subsequent reply (Line 4) reiterated the religious perspective. The teacher revoiced MM's idea again in Line 5, emphasizing its connection to biblical teachings. This subtle move may have signaled that MM's response had not yet addressed the scientific aspect of the question. The evaluation proved effective, as MM revised his explanation in Line 6, suggesting that scientists believed mountains originate from the ground. In Line 7, the teacher immediately revoiced this revised idea, paraphrasing MM's words to confirm her understanding and to further evaluate its alignment with scientific reasoning.

MM continued to build on this new direction in Line 8, elaborating with the idea that mountains start as small rocks that grow over time. At this point, the teacher invited the entire class to engage with MM's idea by asking for their opinions and encouraging discussion (Line 9). This step not only validated MM's revised explanation but also created an opportunity for collaborative sensemaking.

This example demonstrates the teacher's flexible use of revoicing as an evaluative tool to guide a student towards scientific thinking. Although the idea was likely unexpected, the teacher balanced validation and evaluation, encouraging MM to reconsider and revise his ideas without dismissing his initial perspective. Instead of shutting down the conversation, she subtly steered the discussion with revoicing and open-ended questions. The teacher facilitated MM's progression from a religious explanation to one more aligned with scientific concepts. At the same time, the teacher directly affirmed religious language - God and Koran - making the student's lived experiences - his life - "present...in the discipline" (Calabrese Barton & Tan, 2020, p. 434).

The interplay between revoicing and evaluation observed in this episode further highlights revoicing's potential to foster student participation and advance their understanding. When used adaptively, revoicing can clarify mutual understanding while also motivating students to refine and expand their ideas.

Conclusion

The examples above demonstrate the potential of using revoicing with evaluations in the classroom to go beyond mere affirmation or correctness. In each example, by using revoicing as a tool for legitimization, teachers can create discourse where students' views, their personhood, and their lives are integral to disciplinary learning.

In Example 1, the teacher used revoicing and evaluation to affirm and elaborate on TK's completely accurate ideas. This approach not only validated the student's thinking but also clarified her ideas for the class, enhancing understanding for all students. In Example 2, the teacher evaluated LL's mostly accurate idea by explicitly agreeing with 99% of it. She then extended her evaluation by revoicing the idea and clarifying the part that needed adjustment. Moreover, she posed an open-ended question and successfully encouraged further reasoning from the student. In Example 3, the teacher used revoicing as a tool to implicitly or explicitly evaluate MM's progression from a religious explanation of mountain formation to a scientific perspective. Initially, the teacher revoiced MM's religious explanation, evaluating it as connected to biblical teachings. When MM reiterated the religious viewpoint, the teacher reinforced this connection through revoicing. However, when MM revised his explanation to align with scientific reasoning, the teacher revoiced his new response to confirm mutual understanding and evaluate its alignment with scientific thinking. This sequence demonstrates how revoicing can guide students toward refining and expanding their ideas.

These examples illustrate that evaluation, when paired with revoicing, targeted feedback, follow-up questions, or a combination of these strategies, can be a powerful tool to encourage further student contributions. Regardless of whether a student's initial idea is accurate or requires adjustment, thoughtful teacher engagement fosters deeper reflection and discourse. By acknowledging, rephrasing, and offering constructive feedback, teachers not only validate students' thinking but also stimulate student participation and promote productive classroom discussions.

Research indicates that teacher responses that incorporate and build upon student ideas promote meaningful student participation and foster deeper learning (Pierson, 2008; Bishop, 2021). Rather than closing off a discussion, evaluations that respond to the substance of student ideas, instead of just confirming correctness, create opportunities for students to elaborate, refine, and further develop their thinking; after all, students will need accurate science. Therefore, it is crucial for educators to recognize that evaluation, when done thoughtfully, can serve as an integral part of the learning process. By leveraging evaluation as a tool for teaching, educators can facilitate students' deeper learning, rightful presence, and promote a more interactive and inquiry-based multicultural classroom environment.

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